

CLAIMS

WHAT IS CLAIMED IS:

1. A hand-held device for applying a layer of fluid droplets, said device comprising:

a housing including a fluid reservoir;

an inlet port in the housing for receiving pressurized fluid;

5 a rotatable brush roll including a plurality of bristles, the brush roll being configured for rotation along an axis positioned to have a selected spatial relationship relative to an exit window in the housing;

a conduit for delivering the pressurized fluid to the bristles in the brush roll;

10 at least one flipper element positioned to contact the tips of the bristles extending over a corresponding section of the rotatable roll so that fluid collected therein is propelled through the exit window in the housing with a pattern at least in part based on the selected spatial relationship between the rotation axis of the brush roll and the exit window; and

an outlet port for draining fluid that accumulates in the reservoir.

15 2. The hand-held device of claim 1 wherein the exit window comprises a generally rectangular window and the rotation axis of the brush roll is positioned generally perpendicular relative to the longitudinal axis of the exit window.

20 3. The hand-held device of claim 1 wherein the exit window comprises a generally rectangular window and the rotation axis of the brush roll is positioned generally parallel relative to the longitudinal axis of the exit window.

25 4. The hand-held device of claim 1 further comprising a shutter coupled to a trigger assembly for selectively opening and closing the exit window in response to respective commands from an operator of the device.

5. The hand-held device of claim 1 further including an enclosure for receiving an electric motor coupled to drive the rotatable roll.

6. The hand-held device of claim 5 further including a pump powered by the motor and in fluid communication with the conduit to supply the pressurized fluid to the bristles in the rotatable roll.

5 7. The hand-held device of claim 5 further including a rechargeable power source coupled to the electric motor.

8. The hand-held device of claim 1 wherein the conduit for delivering the pressurized fluid to the rotatable brush roll is integrated with the at least one flipper
10 element.

9. The hand-held device of claim 1 wherein the at least one flipper element is part of a flipper array including additional flipper elements each distributed over respective sections of the brush roll so that each flipper element contributes a
15 portion to the overall pattern of fluid propelled through the exit window.

10. The hand-held device of claim 8 wherein at least one or more of the flipper elements in the flipper array is adjustable to vary the pattern of fluid propelled through the exit window.

11. A hand-held device for applying a layer of fluid droplets, said device comprising:

a housing including a fluid reservoir;

a rotatable brush roll in the housing and including a plurality of bristles, the
5 brush roll configured for rotation along an axis positioned to have a selected spatial relationship relative to an exit window in the housing, wherein the exit window extends at least along a longitudinal axis and the rotation axis of the brush roll is positioned generally perpendicular relative to the longitudinal axis of the exit window; and

10 a conduit for delivering pressurized fluid to the bristles in the brush roll;
at least one flipper element positioned to contact the tips of the bristles extending over a corresponding section of the rotatable brush roll so that fluid collected therein is propelled through the exit window in the housing with a pattern angularly spreadable along said longitudinal axis and focused along the width of the
15 window.

12. The hand-held device of claim 11 further comprising a shutter coupled to a trigger assembly for selectively opening and closing the exit window in response to respective commands from an operator of the device.

20 13. The hand-held device of claim 11 further including at least one enclosure for receiving an electric motor coupled to drive the rotatable brush roll, the enclosure further receiving a pump driven by the motor and in fluid communication with the conduit to supply the pressurized fluid to the bristles in the rotatable roll.

25 14. The hand-held device of claim 11 wherein the conduit for delivering the pressurized fluid to the bristles in the rotatable brush roll and the at least one flipper element comprise an integral unit.

15. The hand-held device of claim 11 wherein the at least one flipper element is part of an array including additional flipper elements each distributed over respective sections of the brush roll so that each flipper element contributes a portion to the overall pattern of fluid propelled through the exit window.

5 16. The hand-held device of claim 15 wherein the at least one or more of the flipper elements in the flipper array is adjustable to vary the pattern of fluid propelled through the exit window.

10 17. A hand-held device for applying a layer of fluid droplets, said device comprising:

a housing including a fluid reservoir;

a rotatable brush roll in the housing and including a plurality of bristles, the brush roll configured for rotation along an axis positioned to have a selected spatial relationship relative to an exit window in the housing, wherein the exit window
15 longitudinally extends at least along a longitudinal axis and the rotation axis of the brush roll is positioned generally parallel relative to the longitudinal axis of the exit window;

a conduit for delivering pressurized fluid to the bristles in the brush roll; and

at least one flipper element positioned to contact the tips of the bristles
20 extending over a corresponding section of the rotatable brush roll so that fluid collected therein is propelled through the exit window in the housing with a pattern focused along said longitudinal axis and angularly spreadable relative to the width of the window.

25 18. The hand-held device of claim 17 further comprising a shutter coupled to a trigger assembly for selectively opening and closing the exit window in response to respective commands from an operator of the device.

19. The hand-held device of claim 17 further including at least one enclosure for receiving an electric motor coupled to drive the rotatable brush roll, the enclosure further receiving a pump driven by the motor and in fluid communication with the conduit to supply the pressurized fluid to the bristles in the rotatable roll.

5 20. The hand-held device of claim 17 wherein the conduit for delivering the pressurized fluid to the bristles in rotatable brush roll and the at least one flipper element comprise an integral unit.

10 21. The hand-held device of claim 17 wherein the at least one flipper element is part of an array including additional flipper elements each distributed over respective sections of the brush roll so that each flipper element contributes a portion to the overall pattern of fluid propelled through the exit window.

15 22. The hand-held device of claim 21 wherein at least one or more of the flipper elements in the flipper array is adjustable to vary the pattern of fluid propelled through the exit window.